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22 February 2011

Dr. M. Manucher Alemi
California Department of Water Resources
Water Use and Efficiency Branch
SB7X-7 Program
P.O. Box 942839
Sacramento, CA 94236

Dear Dr. Alemi,

Thank you for the opportunity to comment on the Discussion Paper: Draft Range of Options for Agricultural Water Measurement. The successful implementation of this legislation will undoubtedly benefit all Californians. Please find my comments below regarding instrumentation.

Section 597.3 Agricultural Water Measurement Range of options

a) Measurement using Manufactured devices

Comment:

When discussing instrument accuracy are there separate accuracy categories for measuring flow in pipe and open channels?

When considering flow in open channels, will there be a delineation of accuracy based on channel size (i.e. measuring in a turnout as opposed to measuring in a lateral)? The larger the open channel the more difficult to meet an accuracy specification without a site specific calibration.

There is mention of instruments provided by a manufacturer undergoing NIST traceable testing in a laboratory setting. Often these types of requirements do not translate well to the field flow measurements. Provisions for field verification measurements on-site may be necessary in order to ensure proper installation and accuracy of the instrument.

When considering accuracy for flow rate or volume there should be a tiered approach – obtaining high-level accuracy at extremely low volume or flow rates is not feasible.

Section 507.4 Installation, Operation and Maintenance of Agricultural Water Measurement Devices

As noted in section a) “all measurement devices shall be correctly installed, maintained, operated, inspected and monitored”...



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Comment: As a manufacturer of instruments for more than 15 years one of the most common mistakes observed in the field is failure to properly maintain the field site. Two examples are making sure that the cross-section is cleaned periodically as well as ensuring that the instrument is functioning properly. These two examples have a large impact on the accuracy of the measurement and should be carefully considered in the narrative of this section and when implementing a flow monitoring network.

Please feel free to contact me if clarification of my comments is needed. Thanks again for the opportunity to comment on this Discussion Paper.

Best regards,

A handwritten signature in black ink, appearing to read "Mike Cook".

Mike Cook, PhD
SonTek/YSI